

January 2, 1952

Dear Bernie:

Best wishes for the enterprises outlined in your letter of the 29th as well as for the new year generally.

Your letter to Plough correctly puts the onus on me as the initiator of your enquiry. I hope that there will be some explanation that will reduce the embarrassment to all of us! There is a rumor that Plough's transductions have been very unstable, which might account for some of the inconsistencies, but I do not know how sound this intelligence is.

Re aromatic metabolism in Salmonella, why not append your comment to your current paper when you get it back from the reviewer (or aren't your comments subject to revision?) Although each is interesting enough in its own right, I am not sure how deeply biochemical and genetic studies of thorny situations like this can be correlated. Are there any strictly analogous sequences of *E. coli* mutants which could be independently examined for allelism?

Let me know when Yaniv and yourself have cleaned up the preliminaries on your resistant mutants, so that I can prepare to join the fray. In my last letter, I may have recommended making the mutants in W-677, but this has disadvantages which make your program, of crossing P-H-derivs. x W-677, rather better. I would be more discouraged about a simple enough genetic situation except that Tom Nelson has been looking at multi-step resistance to furadoxyl in K-12. Fortunately, the steps are either alleles or very closely linked factors which behave essentially as units. When your bugs are ready, we may take the occasion to make heterozygotes with these as well. Unfortunately, furadoxyl-resistance is closely linked to Mal, etc. However, judging from the effect on recombination, furadoxyl-sensitivity is dominant to resistance, but this is not a sufficiently explicit test that I would rely very heavily on it. If verified, it would help support the notion that zygotes which receive a Mal.... segment from an F+ parent are phenotypically influenced by it prior to its elimination. Hayes has interpreted a somewhat different result with streptomycin as indicating that the segment never does get into the zygote in the first place.

Yours sincerely,


Joshua Lederberg